

REMARKS

Status of the Claims

Claims 1-24 are now present in this application. Claim 1 is independent.

Claims 1-24 have been amended. Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document from the International Bureau.

Information Disclosure Citation

Applicants thank the Examiner for considering the references supplied with the Information Disclosure Statements filed May 25, 2006; July 17, 2006 and June 5, 2007, and for providing Applicants with initialed copies of the PTO-SB08 forms filed therewith.

Drawings

Since no objection has been received, Applicants assume that the drawings are acceptable and that no further action is necessary. Confirmation thereof in the next Office Action is respectfully requested.

Claim Amendments

Applicants have amended the claims in order to place the claims in better form. The claim amendments are not being made in response to any statutory requirement for patentability, and have not been narrowed in scope. Instead, the claims have been amended merely to recite the subject matter therein more clearly.

Rejection Under 35 U.S.C. § 112, 2nd Paragraph

Claim 24 stands rejected under 35 U.S.C. § 112, 2nd Paragraph. This rejection is respectfully traversed.

The Examiner has set forth certain instances wherein the claim language lacks antecedent basis.

In order to overcome this rejection, Applicants have amended claim 24 to correct each of the deficiencies specifically pointed out by the Examiner. Claim 24 now depends from claim 10. Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections under 35 U.S.C. §103

Claims 1, 2 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruckl in view of Beyer et al. or Klein. Further, claims 3-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruckl in view of Beyer et al. or Klein and further in view of Urlichs and claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruckl in view of Beyer et al. or Klein and further in view of Rinaldi. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

The Examiner states that Ruckl discloses the invention as claimed except for a hood with a vacuum extraction channel. The Examiner relies upon either Beyer et al. or Klein for disclosing a vacuum extraction channel for vacuuming the interior air of the hood and alleges that it would have been obvious to use this feature with the device of Ruckl. Applicants respectfully disagree.

Claim 1 recites, *inter alia*, a hood, which covers a region of interaction between the radiation and the workpiece surface and comprises a vacuum extraction channel, the inlet opening of which lies opposite the workpiece surface in the operating position of the hood and can be connected to a vacuum extraction line. Such a hood is neither disclosed nor suggested by Ruckl.

Beyer et al. discloses an imaging head 2 with an optical element 12 having a window 13. An imaging beam 18 is directed through the window at a media and producing debris 25. To prevent the debris from being deposited on the window, a fluid flow is established to form a barrier between the debris and the window. An optional vacuum sink 17 removes debris from the vicinity of the laser beam. There is no suggestion by Beyer et al. to combine a hood covering a

region of interaction between the radiation and the workpiece surface and a C-shaped cover ring to provide a vacuum effect in both the interaction region and an adjacent region of the workpiece. The disclosure of Beyer et al. is concerned only with the protection of the area around the window 13. For that reason, fluid source 36 creates a flow across the window 13 toward the vacuum sink, creating a system having a much narrow scope of effectiveness than is recited in the claim.

Klein discloses a vacuum extraction hood for removing debris created by interaction of a laser with a workpiece but gives no suggestion of a combination of a C-shaped cover ring combined with a vacuum extraction hood to ensure the complete removal of fumes generated by the interaction of the laser with a workpiece. The hood 7 of Klein has nozzles 16 creating a curtain 21 about the perimeter of the hood, the flow of gases through the nozzles moving upward due to the relative vacuum under the hood. Similar to Beyer et al., Klein discloses the use of a vacuum over a small confined area and there is no suggestion of using a vacuum over the entire perimeter of the workpiece, as opposed to the perimeter of the hood.

Applicants respectfully submit that one of ordinary skill in the art would not combine the teachings of Beyer et al. or Klein with the device of Ruckl and that, even if combined, would not result in the hood, which covers a region of interaction between the radiation and the workpiece surface and comprises a vacuum extraction channel, the inlet opening of which lies opposite the workpiece surface in the operating position of the hood and can be connected to a vacuum extraction line, as recited in claim 1. The remaining references relied upon by the Examiner in the rejections of the dependent claims, Urlichs and Rinaldi, do not cure the deficiencies of the combination of Ruckl with Beyer et al. or Klein noted above.

With regard to dependent claims 2-24, Applicants submit that claims 2-24 depend, either directly or indirectly, from independent claim 1 which is allowable for the reasons set forth above, and therefore claims 2-24 are allowable based on their dependence from claim 1. Reconsideration and allowance thereof are respectfully requested.

Allowable Subject Matter

The Examiner states that claims 8 and 10-23 would be allowable if rewritten in independent form.

Applicants thank the Examiner for the early indication of allowable subject matter in this application. However, claims 8 and 10-23 have not been rewritten in independent form at this time, since it is believed that independent claim 1 from which these claims depends is allowable.

The Examiner states that claim 24 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 112, 2nd Paragraph.

Applicants thank the Examiner for the early indication of allowable subject matter in this application. Claim 24 has been amended as set forth above in order to overcome the rejection under 35 U.S.C. § 112, 2nd Paragraph. However, claim 24 has not been rewritten in independent form at this time, since it is believed that independent claim 1 from which this claim depends is allowable.

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Christopher J. McDonald, Registration No. 41,533 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: JAN 26 2010

Respectfully submitted,

By


Paul C. Lewis *cjm*

Registration No.: 43368

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road, Suite 100 East

P.O. Box 747

Falls Church, VA 22040-0747

703-205-8000